

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-15 (Canceled).

16. (Previously Presented) An optoelectronic sensor based on optodes, comprising:

a semiconductor substrate;

a plurality of separate light-sensitive sensors arranged on the semiconductor substrate;

a light emitter located in a center of the semiconductor substrate; and

a transparent optode material covering the light emitter and the plurality of separate light-sensitive sensors, wherein:

the transparent optode material is reflective on a side that faces away from the semiconductor substrate.

17. (Previously Presented) The optoelectronic sensor according to claim 16, further comprising:

metal particles arranged into the transparent optode material and by which a reflectivity is created.

18. (Currently Amended) ~~[[The]]~~ An optoelectronic sensor ~~according to claim 16~~ based on optodes, ~~further~~ comprising:

a semiconductor substrate;

a plurality of separate light-sensitive sensors arranged on the semiconductor substrate;

a light emitter located in a center of the semiconductor substrate;

a transparent optode material covering the light emitter and the plurality of separate light-sensitive sensors, wherein the transparent optode material is reflective on a side that faces away from the semiconductor substrate; and

an opaque material covering the transparent optode material.

19. (Currently Amended) ~~[[The]]~~ An optoelectronic sensor according to claim 16 based on optodes, comprising:

a semiconductor substrate;

a plurality of separate light-sensitive sensors arranged on the semiconductor substrate;

a light emitter located in a center of the semiconductor substrate; and

a transparent optode material covering the light emitter and the plurality of separate light-sensitive sensors, wherein the transparent optode material is reflective on a side that faces away from the semiconductor substrate,

wherein~~[[:]]~~ the transparent optode material is a polymer to which an indicator substance is added.

20. (Previously Presented) The optoelectronic sensor according to claim 19, wherein:
the indicator substance includes pigment molecules.

21. (Previously Presented) The optoelectronic sensor according to claim 18, wherein:
the opaque material is a polymer.

22. (Previously Presented) The optoelectronic sensor according to claim 18, wherein:
the plurality of separate light-sensitive sensors are arranged as sectors and rotationally symmetrically around the light emitter.

23. (Previously Presented) The optoelectronic sensor according to claim 16, wherein:
the semiconductor substrate is an n-type silicon substrate, and
the plurality of separate light-sensitive sensors are made of p-type silicon.

24. (Previously Presented) The optoelectronic sensor according to claim 16, wherein:
the plurality of separate light-sensitive sensors form photodiodes, and the light emitter is an LED.

25. (Previously Presented) The optoelectronic sensor according to claim 16, wherein:
the transparent optode material detects one of a nitrogen oxide and carbon monoxide.

26. (Currently Amended) [[The]] An optoelectronic sensor according to claim 16 based on optodes, further comprising:

a semiconductor substrate;

a plurality of separate light-sensitive sensors arranged on the semiconductor substrate;

a light emitter located in a center of the semiconductor substrate;

a transparent optode material covering the light emitter and the plurality of separate light-sensitive sensors, wherein the transparent optode material is reflective on a side that faces away from the semiconductor substrate; and

an oxidation material provided on a carrier material.

27. (Previously Presented) The optoelectronic sensor according to claim 16, further comprising:
a molecular sieve.

28. (Previously Presented) The optoelectronic sensor according to claim 16, further comprising:
a plurality of barriers arranged between transmission branches.

29. (Previously Presented) The optoelectronic sensor according to claim 16, wherein:
the light emitter can be operated by an electrical pulse.

30. (Previously Presented) A gas sensor array, comprising:
a plurality of array elements, each array element corresponding to an optoelectronic sensor based on optodes, the optoelectronic sensor including:

a semiconductor substrate,

a plurality of separate light-sensitive sensors arranged on the semiconductor substrate,

a light emitter located in a center of the semiconductor substrate, and

a transparent optode material covering the light emitter and the plurality of separate light-sensitive sensors, wherein the transparent optode material is reflective on a side that faces away from the semiconductor substrate.

31. (New) The optoelectronic sensor according to claim 16, wherein the optode material is rounded-off at an end next to the plurality of separate light-sensitive sensors.

32. (New) The optoelectronic sensor according to claim 28, wherein at least one of the plurality of barriers includes a metal layer.

33. (New) The optoelectronic sensor according to claim 28, wherein at least one of the plurality of barriers includes a dielectric material.